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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/315,599 | 05/20/1999 | RITU SHRIVASTAVA | ALSC-00300 | 6720 |

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HAVERSTOCK & OWENS LLP
162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086

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| EXAMINER |
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HA, NATHAN W

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| ART UNIT | PAPER NUMBER |
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2814

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/315,599

Applicant(s)

SHRIVASTAVA, RITU

Examiner

Nathan W. Ha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 18-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 18-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The previous 112 rejections have being withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoo et al. (US. 5,605,853, previously cited), in view of Mehta (US. 5,679,559, previously cited.).

In regard to claims 1, 5, 9, 18, 23 and 26, and accordance to 112 rejections above, in fig. 7, Yoo et al. discloses a common substrate 10;

an SRAM device 50 implemented on the common substrate and isolated by LOCOS isolation technique 12; and

a flash EPROM device 70 implemented on the common substrate 10 and isolated by LOCOS isolation technique 12.

Yoo et al., however, does not expressly disclose a second isolation technique such as STI to isolate the devices. Mehta, in fig. 18, teaches a first and second isolation techniques 200 and 230b filled with first and second materials 242 and 240 to separate

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the devices on the same substrate in order to scale the minimum spacing between regions, please see col. 6, last paragraph and the first depth is larger than second depth. Furthermore, the trench isolation is needed in densely packed regions where the active spacing is small, such as a memory array in a DRAM, SRAM, or EPROM; see also, col. 4, lines 50-56.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use STI isolation technique as taught by Mehta in Yoo et al. substrate in order to scale the minimum spacing between regions.

In regard to claims 2-3, 7-8, and 19-20 Mehta discloses the first technique is the STI technique and the second isolation technique is LOCOS isolation, as discussed in claim 1 above.

In regard to claims 4, 6, and 10, Yoo et al. discloses SRAM coupled EPROM for transmitting signals, see fig. 7.

Regarding the processing limitations recited in (claims 1, 5, and 9) (implemented non-concurrently, etc.), this would not carry patentable weight in this claim drawn to structure. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

In regard to claims 21-22, and in accordance with the 112 rejections above, Yoo discloses the LOCOS field oxides are made of oxide; see col. 3, lines 60-61, and Mehta also teaches LOCOS and STI are made of oxide, see col. 5, lines 45-46 and col. 6, lines 61-62, for example.

In regard to claims 24 and 27, Mehta or Yoo shows the first structure and second structure are contiguous, see Mehta's fig. 18.

In regard to claims 25 and 28, Mehta or Yoo further discloses the structures comprise oxide metal, see Yoo's fig. 7.

Response to Arguments

4. Applicant repeatedly submits, "Yoo does not teach or suggest that a SRAM and an EEPROM can be formed on the same IC, using non-LOCOS isolation process, such as a shallow isolation (STI) process. Nor does Yoo teach or suggest that a SRAM and an EEPROM can be formed on the same IC, using a combination of a LOCOS and STI isolation process." As addressed in the previous Official Action, the combination of Yoo and Mehta teaches the technique of using LOCOS and STI isolations. The LOCOS and STI apparently are different. Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Furthermore, applicant argues about the limitations of a method of making the device, on pages 5-6. It is noted that applicant elected the device claims in the previous amendment, paper 15. The method claims, Group II, therefore, has been withdraw from the examination. The newly added limitation such as implemented concurrently also is process limitation, see above discussions. Thus, the device may be made of a different process, for example, simultaneously, as taught by Mehta, see col. 4, lines 48-51.

Please focus to the limitations in the pending claims that have been addressed in the

Official Actions only in order to eliminate any confusion in the next communication papers. Furthermore, as mentioned above, the processing limitations recited in (claims 1, 5, and 9) (implemented non-concurrently, etc.), this would not carry patentable weight in this claim drawn to structure. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

In response to applicant's argument that there is no suggestion or motivation to combine the above references, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). In this case, Mehta indeed discusses the advantage of using STI trench technology over the LOCOS, for example, see Mehta's col. 4, lines 45-65 and col. 6, lines 45-65.

Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Ha whose telephone number is (703) 305-3507. The examiner can normally be reached on M-TH 8:00-7:00(EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and 308-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Nathan Ha
August 4, 2003

A handwritten signature in black ink, appearing to be 'Long Pham', written in a cursive style.

LONG PHAM
PRIMARY EXAMINER